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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/678,004

10/02/2003

Thomas J. Ribarich

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05/31/2006

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EXAMINER

SAWHNEY, HARGOBIND S

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/678,004

Applicant(s)

RIBARICH, THOMAS J.

Examiner

Hargobind S. Sawhney

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-16 and 38-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-16 and 38-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The amendment filed on August 4, 2005 has been entered. Accordingly:
  - Claims 1 and 38 have been amended; and
  - Claims 3 and 17-37 have been canceled.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1, 2, 4-16 and 38-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muessli (US Patent No.: 6,548,948 B1) in view of Mies et al. (WO 96/13048), hereinafter as Mies.

Regarding claim 1, Muessli ('948 B1) discloses a compact florescent lamp package (Figures 1-3) comprising:

- a base 10 electrically connectable to the electrical socket capable for receiving an ordinary incandescent lamp (Figure 3, column 4, line 9);
- the base 10 including an open end 14, a closed end 13 and a wall 11 enclosing space (Figure 3, column 4, lines 35-37);

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- a multi-chip module including a ballast circuit 40 on a circuit board 41 (Figure 3, column 4, lines 38-41); and
- the multi-chip module being contained entirely within the space defined in the base 10 (Figure 3, column 4, lines 38 and 39), and the multi-chip module being electrically connected to the base 10 with the element 48 (Figure 3); and
- the circuit board 41 including opposing surfaces, one surface, bearing elements 15, facing the opening and the other surface, bearing elements 48, facing the closed end 13 (Figure 3);
- a fluorescent lamp 31 extending away from the base 10 (Figures 1-3), and operatively connected to the ballast circuit 40 (Figures 1 and 3, column 3, lines 66 and 67, and column 4, lines 1-4).

However, Muessli ('948 B1) does not specifically teach:

- a thermally conductive body disposed within the base; and the thermally-conductive base thermally connecting the base to said ballast circuit.

On the other hand, Miles disclose a compact fluorescent lamp package (Figure 1) comprising a base 3 housing ballast module B (Figure 1, page 3, lines 27 and 28). Miles further teaches the cavity space of the base 3 including thermally conductive body D for mechanical stability and improved thermal management (Figure 1, Page 2, lines 16-32). Additionally, Miles teaches the thermally conductive body thermally connecting the wall 6 of the screw base 3 to the ballast circuit directly (Figure 1).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the compact Fluorescent lamp package of Muessli ('948 B1) by filling thermal epoxy compound as taught by Mies for benefit and advantage of efficiently dissipating heat to the outer casing, and providing mechanical stability to the circuit board, and improving efficiency and operational life of the device.

Regarding claims 2, 4-6, 9, 10, 12-16, Muessli in view of Mies discloses the compact florescent lamp package (Figures 1-3 and 8) comprising:

- a diffuser cover 1 enveloping the fluorescent lamp 30, and providing appearance of an ordinary incandescent lamp, and directly connected to the base 10 (Muessli, Figure 8, column 5, lines 54-56); the base 10 being an Edison screw base (Figures 1-3 and 8);
- the multi-chip module 40 mounted on a single circuit board 41 (Muessli, Column 4, lines 38-41);
- the ballast circuit 40 including elements mounted on both sides of the circuit board 41 (Muessli, Column 2, lines 63-65, and Column 4, lines 38-41);
- the thermally conductive body being a thermal epoxy (Mies, Figure 1, Page 2, lines 16-32);
- the circuit board 41 having its parameters conforming the base configuration (Muessli, Figure 3);
- the circuit board 41 being generally rectangular circuit board (Muessli, Figure 3);

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- the wall of the base 11 serving as a connector connecting the lamp 31 to first pole of a power line and the closed end 12 of the base insulated from the wall, and further connecting to the second pole of the power line (Muessli, Figure 3, column 3, lines 60-65);
- the multi-chip module 40 electrically connected to the wall 11 of the screw base via a first wire 15 (Muessli, Figure 3, column 4, lines 24-28), and the multi-chip module 40 further electrically connected to a connector 13 via a second wire 49 (Muessli, Figure 3, column 3, lines 59-64);
- the fluorescent lamp 30 connected to multi-chip module 40 via respective filament terminals 50 (Muessli, Figure 4, column 3, lines 8-12);
- the multi-chip module 40 including a circuit board 41 with a heatsink 10 disposed on its surface, and the heatsink 10 – lamp base - being thermally connected through the circuit board 40 to the heat generating components including elements 43, 45 and 46 (Muessli, Figure 3, column 2, lines 9-14);

Regarding claims 7 and 8, each dependent on Claim 6, Muessli ('948 B1) in view of Mies discloses the compact florescent lamp package comprising a circuit board carrying electronic components on its both sides. However, neither combined nor individual teaching of Muessli ('948 B1) and Miles teaches specifically a circuit board carrying design dependent electronic components on one side, and the design-independent electronic components on another side opposing side.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to position design dependent electronic components on one side of the circuit board, and the design-independent electronic components on another side opposing side , since it has been held that rearranging parts of a prior art structure involves only routing skill in the art. Further rearrangement of electronic components would facilitate assembly of the device in an orderly manner.

Regarding Claim 11, dependent on Claim 1, Muessli ('948 B1) in view of Mies discloses the compact florescent lamp package comprising a generally rectangular circuit board. However, neither combined nor individual teaching of Muessli and Mies teaches specifically a circular circuit board.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a generally circular circuit board instead of a generally rectangular one, since it has been held that a change in shape or configuration, without any criticality, is nothing more than one of numerous shapes that one of ordinary skill in the art.

Regarding claims 38-42, Muessli ('948 B1) in view of Mies meets the limitations in similar manner as that detailed above for the rejections of claims 1, 2, 4, 6 and 9.

### ***Response to Amendment***

4. Applicant's arguments filed on March 28, 2006 with respect to the 35 U.S.C. 103(a) rejection of claims 1 and 38 have been fully considered but they are not persuasive.

Argument:                Regarding each of claims 1, both Muessli (US Patent No.: 6,548,948 B1) and Miles (WIPO Patent No.: WO 96/13048) teach a compact fluorescent lamp including a vertically oriented circuit board, which would either allow maximum area for components of limited heights, or relatively less area for components of relatively higher heights.

Response:                The argument has no bearing on the claimed matter. Even if the applicant's intention is to emphasize on the benefits of a horizontally oriented circuit board, the use of horizontally oriented circuit board is well known in the art as evidenced in Muessli (US Patent No.: 4,961,027).

Argument:                Regarding each of Claims 1 and 38, Miles (WIPO Patent No.: WO96/13048) teaches a thermally conductive mass D, which is only in contact with plate P, and therefore, heat can only escape through plate 1. There is no disclosure that the body D can support the heat conducting plate.

Response:                Miles (WIPO Patent No.: WO96/13048) teaches capsulation of the ballast circuit B by means of synthetic resin paste D, and setting of the synthetic resin forms thermally conducting connection between the ballast circuit and the housing (Figure 1, Page 1, lines 21-27).

It would be have been obvious to one of ordinary skill in the art at the time of the invention to modify the compact Fluorescent lamp package of Muessli by filling and setting the thermal epoxy compound as taught by Mies for benefit and advantage of efficient heat dissipation and mechanical stability of the ballast circuit board, and thus improving efficiency and operational life of the device.

As the synthetic resin is filled and set in the housing, it would support the ballast circuit with adequate lateral support, which would withstand weight and eccentric forces generated by the ballast circuit components.

Thus, Muessli in view of Mies discloses the compact florescent lamp package meeting the limitations of each of the amended independent claims 1 and 38.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S Sawhney whose telephone number is 571 272 2380. The examiner can normally be reached on 8:30 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571 272 2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HSS

5/22/2006

  
**ALI ALAVI**  
**PRIMARY EXAMINER**